



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

County Program Manager Fund Expenditure Plan Guidance Fiscal Year Ending 2013

Transportation Fund for Clean Air



Bay Area Air Quality Management District
939 Ellis Street, San Francisco, CA 94109
December 22, 2011.

TABLE OF CONTENTS

REMINDER CHECKLIST	1
INTRODUCTION.....	2
THE TFCA PROGRAM.....	2
TFCA PROGRAM MANAGER FUND ROLES AND RESPONSIBILITIES.....	3
ELIGIBLE TFCA PROJECT TYPES.....	4
ATTRIBUTES OF COST-EFFECTIVE PROJECTS	4
PROGRAM SCHEDULE	5
EXPENDITURE PLAN APPLICATION PROCESS	6
PROGRAMMING OF FUNDS	6
PROJECT INFORMATION AND REPORTING FORMS	7
ADDITIONAL INFORMATION	8
 APPENDIX A	
GUIDELINES FOR ELIGIBLE TFCA REIMBURSABLE COSTS	9
 APPENDIX B	
SAMPLE SUMMARY INFORMATION AND ADDENDUM FORMS	11
 APPENDIX C	
FUNDING STATUS REPORT FORM	13
 APPENDIX D	
BOARD-ADOPTED TFCA COUNTY PROGRAM MANAGER POLICIES FOR FYE 2013	14
 APPENDIX E	
INSURANCE GUIDELINES	21
 APPENDIX F	
PROJECT INFORMATION FORM	23
 APPENDIX G	
INSTRUCTIONS FOR COST-EFFECTIVENESS WORKSHEETS	24

REMINDER CHECKLIST

On each of the due dates listed below, please submit the following:

Note: Items due on dates that fall on weekends or on State/Federal holidays are due on the next following business day.

- ☐ **April 2, 2012 - Expenditure Plan application for fiscal year ending (FYE) 2013** - The application should include:
 - Summary Information Form, signed and dated by Program Manager's Executive Director
 - Summary Information Addendum Form (if applicable)

- ☐ **Within 6 months of Air District Board approval of allocation, and within 3 months for projects that do not conform to all TFCA Policies:**

For each project:

 - Appendix E – Project Information Form
 - Appendix F – Cost-effectiveness Worksheets and supporting documentation

- ☐ **Every May 31** (See Page 7)
 - **Funding Status Report Form** – Include all open projects and projects closed since July 1.
 - **Final Report Form** – For projects closed July 1-December 31 (and optionally those closing later), submit both a Final Report Form and a final Cost-effectiveness Worksheet.

- ☐ **Every October 31** (See Page 7)
 - **Interim Project Report Form** – Submit this form for every open project.
 - **Funding Status Report Form** – Include all open projects and projects closed since January 1.
 - **Final Report Form** – For projects closed January 1-June 30 (and optionally those closing later), submit both a Final Report Form and a final Cost-effectiveness Worksheet.

TRANSPORTATION FUND FOR CLEAN AIR (TFCA)

INTRODUCTION

On-road motor vehicles, including cars, trucks, and buses, constitute the most significant source of air pollution in the Bay Area. Vehicle emissions represent the largest contributor to unhealthy levels of ozone (summertime "smog") and particulate matter.

To protect public health, the State Legislature enacted the California Clean Air Act in 1988. Pursuant to this law, the Air District has published the *2010 Clean Air Plan (CAP)*, which describes how the region will work toward compliance with State and Federal ambient air quality standards and make progress on climate protection. To reduce emissions from motor vehicles, the *2010 CAP* includes transportation control measures (TCMs) and mobile source measures (MSMs). A TCM is defined as "any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions." MSMs encourage the retirement of older, more polluting vehicles and the introduction of newer, less polluting motor vehicle technologies.

THE TFCA PROGRAM

To fund the implementation of TCMs and MSMs, the State Legislature authorized the Bay Area Air Quality Management District to impose a \$4 surcharge on motor vehicle registration fees paid within the San Francisco Bay Area. These revenues are allocated by the Air District through the Transportation Fund for Clean Air (TFCA). TFCA grants are awarded to public and private entities to implement eligible projects.

TFCA-funded projects have many benefits, including the following:

- ✓ Reducing air pollution, including air toxics such as benzene and diesel particulates
- ✓ Conserving energy and helping to reduce greenhouse gas emissions
- ✓ Improving water quality by decreasing contaminated runoff from roadways
- ✓ Improving transportation options
- ✓ Reducing traffic congestion

Forty percent (40%) of these funds are allocated to a designated program manager within each of the nine counties within the Air District's jurisdiction. This allocation is referred to as the TFCA Program Manager Fund. The remaining sixty percent (60%) of these funds are administered directly by the Air District through the TFCA Regional Fund.

This document provides guidance on the expenditure of the 40% of TFCA funding provided to the County Program Managers.

TFCA PROGRAM MANAGER FUND

ROLES AND RESPONSIBILITIES

Program Manager—Each Program Manager is required to:

1. Administer program in accordance with applicable legislation, including Health and Safety Code Sections 44233, 44241, and 44242, and with Air District Board-Adopted TFCA County Program Manager Fund Policies for FYE 2013 (found in Appendix C).
2. Hold one or more public meetings each year for the purpose of adopting criteria for the expenditure of the funds (with criteria to include the Air District Board-Approved TFCA County Program Manager Fund Policies) and to review the expenditure of revenues received.
3. Prepare and submit Expenditure Plan Applications, Project Information forms, Cost-effectiveness Worksheets, and project interim status and final reports.
4. Provide funds only to projects that comply with the Air District Board-Approved Policies and/or have received Air District approval for award.
5. Encumber and expend funds within two years of the receipt of funds, unless an application for funds states that the project will take a longer period of time to implement and an extension is approved by the Air District or the County Program Manager, or unless the time is subsequently extended if the recipient requests an extension and the Program Manager finds that significant progress has been made on the project.
6. Limit administrative costs in handling of TFCA funds to no more than five (5) percent of the funds received in a given fiscal year.
7. Allocate (program) all new TFCA funds within six months of the date of the Air District's approval of the Expenditure Plan.
8. Provide information to the Air District and to auditors on the expenditures of TFCA funds.

Air District—The Air District is required to:

1. Hold a public hearing to:
 - a. Adopt cost-effectiveness criteria that projects and programs are required to meet. Criteria shall maximize emission reductions and public health benefits; and
 - b. Allocate County Program share of DMV fee revenues.
2. Provide guidance, offer technical support, and hold workshops on program requirements, including cost-effectiveness.
3. Review Expenditure Plan Applications, Cost-effectiveness Worksheets, Project Information forms, and reports.
4. Re-distribute unallocated TFCA County Program Manager Funds.
5. Limit TFCA administrative costs to a maximum of five percent (5%).
6. Conduct audits of TFCA programs and projects.
7. Hold a public hearing in the case of any misappropriation of revenue.

ELIGIBLE TFCA PROJECT TYPES

TFCA legislation requires that projects meet eligibility requirements, as described in the California Health and Safety Code 44241. The following is a complete list of mobile source and transportation control project types authorized under the California Health and Safety Code Section 44241(b):

1. The implementation of ridesharing programs;
2. The purchase or lease of clean fuel buses for school districts and transit operators;
3. The provision of local feeder bus or shuttle service to rail and ferry stations and to airports;
4. Implementation and maintenance of local arterial traffic management, including, but not limited to, signal timing, transit signal preemption, bus stop relocation and "smart streets;"
5. Implementation of rail-bus integration and regional transit information systems;
6. Implementation of demonstration projects in telecommuting and in congestion pricing of highways, bridges, and public transit;
7. Implementation of vehicle-based projects to reduce mobile source emissions, including, but not limited to, engine repowers, engine retrofits, fleet modernization, alternative fuels, and advanced technology demonstrations;
8. Implementation of a smoking vehicles program;
9. Implementation of bicycle facility improvement projects that are included in an adopted countywide bicycle plan or congestion management program; and
10. The design and construction by local public agencies of physical improvements that support development projects that achieve motor vehicle emission reductions. The projects and the physical improvements shall be identified in an approved area-specific plan, redevelopment plan, general plan, or other similar plan.

TFCA funds may not be used for:

- *Planning activities that are not directly related to the implementation of a specific project;*
or
- *The purchase of personal computing equipment for an individual's home use.*

ATTRIBUTES OF COST-EFFECTIVE PROJECTS

- √ Project purchases or provides service using best available technology or cleanest vehicle (e.g., zero or partial zero emission vehicles).
- √ Project emission reduction calculations are based on verifiable survey data or results from comparable projects.
- √ Project requests relatively low amount of TFCA funds/Sponsor provides significant matching funds.
- √ For shuttle/feeder bus service and ridesharing projects:

- Project provides service to relatively large number of riders/participants that otherwise would have driven alone.
 - Shuttle provides “first and last mile” connection to employers and transit.
 - Shuttle travels relatively short distances between start and end point and has minimal amount of non-service miles.
- √ For vehicle-based projects:
- Vehicle has high operational use (e.g., annual mileage/fuel consumption/hours).
 - Vehicle is zero emission or achieves significant petroleum reduction.
- √ For arterial management and smart growth projects:
- Pre and post counts demonstrate high usage and potential to affect mode or behavior shift that reduces emissions.
 - Project demonstrates a strong potential to reduce motor vehicle trips by improving mobility via walking, bicycling, and improving transit.
 - Project is located along high volume transit corridors and/or is near major activity centers such as schools, transit centers, civic or retail centers.
 - Project is associated with a multi-modal transit center, supports high-density mixed-use development or communities.

PROGRAM SCHEDULE

Program Schedule for the FYE 2013 Cycle

December 23, 2011	Expenditure Plan Application Guidance issued by Air District, including funding estimates
April 2, 2012	Deadline for Program Managers to submit application
April 26, 2012	Proposed Expenditure Plan funding allocations reviewed by Air District Mobile Source Committee (tentative)
May 2, 2012	Expenditure Plan funding allocations considered for approval by Air District Board of Directors (tentative)
May 20, 2012	Air District provides Agreements to County Program Managers for signature (target)
May 31, 2012	<i>Funding Status and Final Reports due for projects from FY11/12 and prior years</i>
August 2, 2012	Deadline: Within three months of Board approval, Program Manager submits request for Air District approval of any projects that do not conform to TFCA policies (date tentative)

October 31, 2012	<i>Funding Status, Interim Project, and Final Reports due from FY 11/12 and prior years</i>
November 2, 2012	Deadline: Within six months of Board approval, Program Manager provides Cost-Effectiveness Worksheets and Project Information forms for new projects and programmings (date tentative)
May 31, 2013	Funding Status and Final Reports due for projects from FY 12/13 and prior years

EXPENDITURE PLAN APPLICATION PROCESS

By December 23, 2011, the Air District will email Program Managers the Summary Information form and Summary Information Addendum form (Expenditure Plan application materials). These forms must be completed by the Program Manager and returned to the Air District as indicated below. See Appendix B for examples of these forms.

Expenditure Plans are due Monday, April 2, 2012 and must be submitted in hard copy by mail or delivery service to:

Damian Breen, Director, Strategic Incentives Division
Bay Area Air Quality Management District
Strategic Incentives Division
939 Ellis Street
San Francisco, CA 94109

Materials sent to the Air District via fax will not be accepted.

PROGRAMMING OF FUNDS

Program Managers must allocate (program) TFCA Program Manager funds within *six months* of Air District Board approval of a Program Manager's Expenditure Plan and submit a hard copy of: 1) the Cost-Effectiveness Worksheet and 2) a separate Project Information form for each new project or supplemental allocation to an existing project.

Policy #3 provides a mechanism for consideration of projects that are authorized in the TFCA legislation and meet the cost-effectiveness requirement for that project type, but are in some way inconsistent with TFCA County Program Manager Policies specific to that project type. To request that such a project be approved by the Air District, Program Managers must submit a Cost-Effectiveness Worksheet, Project Information form, and supporting documentation to the Air District for review no later than *three months* after Air District Board's approval of the Expenditure Plan. (See the Program Schedule section for further details.)

PROJECT INFORMATION AND REPORTING FORMS

The following Air District approved forms will be posted on the Air District's website at:

<http://www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources/TFCA/County-Program-Manager-Fund.aspx>.

- **Cost-Effectiveness Worksheet (due within 6 months of Air District Board approval of Expenditure Plan, and for FY09/10 projects and later, with the Final Report)**

The purpose of the cost-effectiveness worksheet is to calculate estimated (pre-project) and realized (post-project) emissions reduced for each project, and compare the emissions reductions to the TFCA funds invested. Program Managers must submit a worksheet for each project and must ensure that the TFCA cost-effectiveness is equal to or less than \$90,000 in TFCA funds (or other value if specified in the Policies) per ton of emissions reduced (i.e., reactive organic gases (ROG), oxides of nitrogen (NO_x) and weighted particulate matter (PM)).

Program Managers must submit a cost-effectiveness worksheet in MS Excel format for each project to the Air District pre- and post-project. Post-project evaluations should be completed using the most recent version of C-E worksheet. Instructions for completing the worksheets are found in Appendix G. If you do not use the Air District's default guidelines to determine a project's cost-effectiveness you must provide documentation and information to support alternate values and assumptions to the Air District for review and evaluation.

- **Project Information Form (due within 6 months of Air District Board approval of Expenditure Plan; see Appendix F)**

The primary purpose of the Project Information form is to provide a description of each project funded and other applicable (including technical) information that is not captured in the Cost-Effectiveness Worksheet. A copy of this form and instructions for completing it are found in Appendix F. Project Information forms must be submitted in MS Word for each new project funded and a revised Project Information form must be submitted whenever changes are approved by the Program Manager that affect the information stated on this form.

- **Biannual Funding Status Report Form (due October 31 and May 31; see Appendix C)**

This form is used to track all TFCA Program Manager-funded projects. Provide an update on all open and recently closed projects (closed since January 1 for the October 31 report; since July 1 for the May 31 report) and report any changes in status for all projects, including cancelled, completed under budget, received supplemental funding, or received a time extension during the previous six months. A copy of this form is attached in Appendix C.

- **Final Report Form (due October 31 and May 31; tentatively available August 2012)**

A Final Report Form is due at the conclusion of every project. These forms are available for download from the TFCA Program Manager website. The Final Reports are specific to each type of project. Final Reports are due to the Air District semi-annually as follows:

***Due October 31:** Projects that closed January 1 – June 30 (and optionally those closing later)*

Due May 31: *Projects that closed July 1 – December 31 (and optionally those closing later)*

Note, in previous years these report forms were titled “Project Monitoring Forms”.

- **Annual Interim Project Report Form (due October 31; tentatively available August 2012)**

For each active/open project, an Interim Project Report Form is due annually on October 31. These forms are available for download from the TFCA Program Manager website. This report provides status information on project progress and fund usage. Projects funded prior to the FYE 2013 cycle may use reporting forms that were provided for that project funding year. Program Managers may also choose to require additional reports of project sponsors.

Note, in previous years these report forms were titled “Project Status Reporting Forms”.

ADDITIONAL INFORMATION

Workshops, Support, and Assistance

Air District staff is available to assist with TFCA project cost-effectiveness analysis, workshops for project sponsors, and outreach for TFCA projects. Program Managers are urged to consult with Air District staff when evaluating projects, in particular vehicle and vehicle infrastructure projects, as the determination of surplus emissions reductions beyond regulatory requirements is complex and often dynamic. Please contact us and let us know how we can assist you.

Air District Contacts

Please direct questions to:

Geraldina Grünbaum
Supervising Environmental Planner
(415) 749-4956
ggrunbaum@baaqmd.gov

APPENDIX A

GUIDELINES FOR ELIGIBLE TFCA REIMBURSABLE COSTS

The Transportation Fund for Clean Air (TFCA) enabling legislation allows the vehicle registration fees collected for the program to be used for project implementation costs, as well as administrative project costs. This appendix provides guidance on differentiating and reporting these costs. The Air District will use the definitions and interpretations discussed below in the financial accounting of the TFCA program. The Air District conducts audits on TFCA-funded projects to ensure that the funds have been spent in accordance with the program guidelines and policies.

Project Implementation Costs

Project implementation costs are charges associated with implementing a TFCA-funded project including:

- Documented hourly labor charges (salaries, wages, and benefits) directly and solely related to implementation of the TFCA project,
- Capital costs,
- Capital equipment installation costs,
- Equipment maintenance costs,
- Shuttle driver labor costs,
- Labor costs related to capital purchases,
- Operator or personnel training directly related to project implementation,
- Contractor labor charges related to the TFCA project, and
- Travel and training costs only if these costs are directly related to the implementation of the TFCA-funded project (e.g., the cost of training mechanics to service TFCA-funded natural gas clean air vehicles).

The project implementation costs that are approved by the Program Manager shall be described in a funding agreement. The project sponsor may seek reimbursement for these costs by providing proper documentation with project invoices. Such documentation must show how the project implementation costs were calculated, for example, by listing the date when the hours were worked, employee job title, employee hourly pay rates, tasks, and total charges. Documentation of hourly charges may be provided with time sheets or any other generally accepted accounting method to allocate and document staff time.

Administrative Project Costs

Administrative project costs are the costs associated with the administration of a TFCA project, and do not include project capital or operating costs, as discussed above. Administrative project costs that are reimbursable to a project sponsor are limited to a maximum of five percent (5%) of the total TFCA funds received.

Administrative project costs are limited to the following:

- Costs associated with entering into a TFCA Funding Agreement, including documented hourly labor and overhead costs (salaries, wages, and benefits). Hourly labor charges must be expressed on the basis of hours worked on the TFCA project. Note that costs incurred in the preparation of a TFCA application are not eligible for reimbursement;
- Accounting for TFCA funds; and

- Fulfilling all monitoring, reporting, and record-keeping requirements specified in the TFCA Funding Agreement, including the preparation of quarterly reports, invoices, and final reports.

The project sponsor may seek reimbursement for administrative project costs by providing proper documentation with project invoices. Documentation for administrative project costs will show how these costs were calculated by listing the date when the hours were worked, employees' job titles, employees' hourly pay rates, tasks being charged, and total charges. Documentation of hourly charges may be provided with time sheets or any other generally accepted accounting method to allocate and document staff time.

APPENDIX B

SAMPLE--SUMMARY INFORMATION

Program Manager Agency Name: _____

Contact Person: _____ Phone No.: _____

Email: _____

Address: _____

PART A: NEW TFCA FUNDS

1. Estimated FYE 2013 DMV revenues (based on projected CY2011 revenues): Line 1: \$ _____

2. Difference between prior-year estimate and actual revenue: Line 2: \$ _____

a. Actual FYE 2011 DMV revenues (based on CY2010): \$ _____ *(a minus b equals Line 2)*

b. Estimated FYE 2011 DMV revenues (based on CY2010): \$ _____

3. Interest income. List interest earned on TFCA funds in calendar year 2011. Line 3: \$ _____

4. Estimated TFCA funds budgeted for administration:¹ \$ _____

(Note: This amount may not exceed 5% of the sum of Lines 1 and 2.)

5. Total new TFCA funds available in FYE 2013 for projects and administration Line 4: \$ _____

(Add Lines 1, 2, and 3 - These funds are subject to the six-month allocation deadline.)

PART B: TFCA FUNDS AVAILABLE FOR REPROGRAMMING

6. Total amount from previously funded projects available for reprogramming to other projects. Line 5: \$ _____
(Enter zero (0) if none. If funds are available due to project cancellation or closed projects completed under budget, complete and attach a Summary Information Addendum Form.)

(Note: Reprogrammed funds originating from pre-2006 projects are not subject to the six-month allocation deadline.)

I certify that, to the best of my knowledge, the information contained in this application is complete and accurate.

Executive Director Signature: _____ Date: _____

¹ The "Estimated TFCA funds budgeted for administration" amount is listed for informational purposes only. Per California Health and Safety Code Section 44233, Program Managers must limit their administrative costs to no more than 5% of the actual total revenue received from the Air District.

SUMMARY INFORMATION - ADDENDUM
Complete if there are TFCA Funds Available for Reprogramming

[illegible]

TOTAL TFCA FUNDS AVAILABLE FOR REPROGRAMMING
(Enter this amount in Part B, line 6 of Summary Information form)

\$ _____

* NOTE: Enter UB (for projects that were completed under budget) and CP (for cancelled project)

APPENDIX C

FUNDING STATUS REPORT FORM

Program Manager: _____

Report Period: ☐ May 31st ☒ Oct. 31st

Date: _____

Please update columns in yellow and other cells where applicable.

CP Cancelled Project Update by CMA**UB** Cmpl Under Budget From Air District Database

Column A Funds received should be listed as a negative; a balance from closure under budget listed as a positive

Column B 100% = All components/reports completed, approved and \$ paid out
90% = All components completed; \$ paid out; awaiting Final Report

TFCA Project #	Project Title	Initial TFCA Funds Awarded	Current TFCA Funds Awarded, if Different than Initial	YTD TFCAS Paid Out	A		B		Project Completion Date	Project Cmpl Date per CMA Update	Final Rpt Due to CMA per Agrmnt	Final Rpt Due Date requested by CMA	Comments
					Funds from CP/UB	TFCAS Reprgm to Project# or FY	% Cmpl	% Cmpl per CMA Update					

Please add additional rows for projects that are not listed that are new, open, or recently closed.

Please complete a certification below only if one or more **project completion dates have been extended**.

I _____ (print name), certify that the information provided is complete and correct; and that if any extensions have been approved, that significant progress has been made on the project(s) for which the funds were granted, pursuant to HSC 44242(d).

(Signature)

APPENDIX D

BOARD-ADOPTED TFCA COUNTY PROGRAM MANAGER FUND POLICIES FOR FYE 2013

Adopted November 2, 2011

The following policies apply only to the Transportation Fund for Clean Air (TFCA) County Program Manager Fund.

BASIC ELIGIBILITY

1. **Reduction of Emissions:** Only projects that result in the reduction of motor vehicle emissions within the Air District's jurisdiction are eligible.

Projects must conform to the provisions of the California Health and Safety Code (HSC) sections 44220 et seq. and these Air District Board of Directors adopted TFCA Program Manager Fund Policies for FYE 2013.

Projects must achieve surplus emission reductions, beyond what is currently required through regulations, ordinances, contracts, or other legally binding obligations at the time of the execution of a funding agreement between the Program Manager and the sub-awardee.

2. **TFCA Cost-Effectiveness:** Projects must achieve TFCA cost-effectiveness, on an individual project basis, equal to or less than \$90,000 of TFCA funds per ton of total of emissions reduced, unless a different value is specified in the below policy for that project type. Cost-effectiveness is based on the ratio of TFCA funds awarded divided by the sum total tons of reactive organic gases (ROG), oxides of nitrogen (NO_x), and weighted particulate matter 10 microns in diameter and smaller (PM₁₀) reduced (\$/ton).

Program Manager administrative costs are excluded from the calculation of TFCA cost-effectiveness.

3. **Eligible Projects, and Case-by-Case Approval:** Eligible projects are those that conform to the provisions of the California Health and Safety Code (HSC) section 44241, Air District Board adopted policies and Air District guidance. On a case-by-case basis, Program Managers must receive approval by the Air District for projects that are authorized by the HSC Section 44241 and achieve Board-adopted TFCA cost-effectiveness, but do not fully meet other Board-adopted Policies.
4. **Consistent with Existing Plans and Programs:** All projects must comply with the transportation control measures and mobile source measures included in the Air District's most recently approved plan for achieving and maintaining State and national ambient air quality standards, those plans and programs established pursuant to California Health and Safety Code (HSC) sections 40233, 40717 and 40919, and, when applicable, with other adopted State, regional, and local plans and programs.
5. **Eligible Recipients:** Grant recipients must be responsible for the implementation of the project, have the authority and capability to complete the project, and be an applicant in good standing with the Air District.

A. Public agencies are eligible to apply for all project categories.

- B. Non-public entities are only eligible to apply for new alternative-fuel (light, medium, and heavy-duty) vehicle and infrastructure projects, and advanced technology demonstrations that are permitted pursuant to HSC section 44241(b)(7). No single non-public entity may be awarded more than \$500,000 in TFCA County Program Manager Funds in each funding cycle.
6. **Readiness:** Projects must commence in calendar year 2013 or sooner. “Commence” includes any preparatory actions in connection with the project’s operation or implementation. For purposes of this policy, “commence” can mean the issuance of a purchase order to secure project vehicles and equipment, the delivery of the award letter for a service contract or the delivery of the award letter for a construction contract.
7. **Maximum Two Years Operating Costs:** Projects that provide a service, such as ridesharing programs and shuttle and feeder bus projects, are eligible to apply for a period of up to two (2) years. Grant applicants that seek TFCA funds for additional years must reapply for funding in the subsequent funding cycles.

APPLICANT IN GOOD STANDING

8. **Independent Air District Audit Findings and Determinations:** Project sponsors who have failed either the fiscal audit or the performance audit for a prior TFCA-funded project will be excluded from future funding for five (5) years from the date of the Air District’s final determination in accordance with HSC section 44242, or duration determined by the Air District Air Pollution Control Officer (APCO). Existing TFCA funds already awarded to the project sponsor will not be released until all audit recommendations and remedies have been satisfactorily implemented. A failed fiscal audit means an uncorrected audit finding that confirms an ineligible expenditure of TFCA funds. A failed performance audit means that the project was not implemented as set forth in the project funding agreement.

In case of a failed audit, a Program Manager may be subject to a reduction of future revenue in an amount equal to the amount which was inappropriately expended pursuant to the provisions of HSC Section 44242(c)(3).

9. **Authorization for County Program Manager to Proceed:** Only a fully executed funding agreement (i.e., signed by both the Air District and the County Program Manager) constitutes the Air District’s award of funds for a project. Program Managers may only incur costs (i.e., an obligation made to pay funds that cannot be refunded) after the funding agreement with the Air District has been executed.
10. **Insurance:** Each County Program Manager and project sponsor must maintain general liability insurance, workers compensation insurance, and additional insurance as appropriate for specific projects, with estimated coverage amounts provided in Air District guidance and final amounts specified in the respective funding agreements throughout the life of the project(s).

INELIGIBLE PROJECTS

11. **Duplication:** Grant applications for projects that duplicate existing TFCA-funded projects (including Bicycle Facility Program projects) and therefore do not achieve additional emission reductions are ineligible. Combining TFCA County Program Manager Funds with TFCA Regional Funds to achieve greater emission reductions for a single project is not considered project duplication.

12. **Planning Activities:** Funding may not be used for any planning activities, feasibility studies or other planning activities that are not directly related to the implementation of a specific project or program.
13. **Employee Subsidies:** Projects that provide a direct or indirect financial transit or rideshare subsidy or shuttle/feeder bus service exclusively to employees of the project sponsor are not eligible.

USE OF TFCA FUNDS

14. **Cost of Developing Proposals:** The costs of developing grant applications for TFCA funding are not eligible to be reimbursed with TFCA funds.
15. **Combined Funds:** TFCA County Program Manager Funds may be combined with TFCA Regional Funds to fund a project that is eligible and meets the criteria for funding under both. For the purpose of calculating TFCA cost-effectiveness, the combined sum of TFCA County Program Manager Funds and TFCA Regional Funds shall be used to calculate the TFCA cost of the project.
16. **Administrative Costs:** Administrative costs for TFCA County Program Manager Funds are limited to a maximum of five percent (5%) of the actual Department of Motor Vehicles (DMV) fee revenues that correspond to each county, received for a given fiscal year. Interest earned on prior DMV funds received shall not be included in the calculation of the administrative costs. To be eligible for reimbursement, administrative costs must be clearly identified in the expenditure plan application and in the funding agreement between the Air District and the Program Manager.
17. **Expend Funds within Two Years:** County Program Manager Funds must be expended within two (2) years of receipt of the first transfer of funds from the Air District to the County Program Manager in the applicable fiscal year. A County Program Manager may, if it finds that significant progress has been made on a project, approve no more than two (2) one-year (1-year) schedule extensions for a project. Any subsequent schedule extensions for projects can only be given on a case-by-case basis, if the Air District finds that significant progress has been made on a project, and the funding agreement between the Program Manager and the Air District is amended to reflect the revised schedule.
18. **Unallocated Funds:** Pursuant to HSC 44241(f), any TFCA County Program Manager funds that are not allocated to a project within six months of the Air District Board of Directors approval of the Program Manager's Expenditure Plan may be allocated to eligible projects by the Air District. The Air District shall make reasonable effort to award these funds to eligible projects within the same county from which the funds originated.
19. **Reserved for potential future use.**
20. **Reserved.**
21. **Reserved.**

ELIGIBLE PROJECT CATEGORIES

22. Alternative Fuel Light-Duty Vehicles:

Eligibility: For TFCA purposes, light-duty vehicles are those with a gross vehicle weight rating (GVWR) of 8,500 lbs. or lighter. Light-duty vehicle types and equipment eligible for funding include:

- A. New hybrid-electric, electric, fuel cell, and CNG/LNG vehicles certified by the CARB as meeting established super ultra low emission vehicle (SULEV), partial zero emission vehicle (PZEV), advanced technology-partial zero emission vehicle (AT-PZEV), or zero emission vehicle (ZEV) standards.
- B. New electric neighborhood vehicles (NEV) as defined in the California Vehicle Code.
- C. CARB emissions-compliant vehicle system retrofits that result in reduced petroleum use (e.g., plug-in hybrid systems).

Gasoline and diesel (non-hybrid) vehicles are not eligible for TFCA funding. Funds are not available for non-fuel system upgrades such as transmission and exhaust systems and should not be included in the incremental cost of the project.

TFCA funds awarded may not exceed incremental cost after all other applicable manufacturer and local/state/federal rebates, tax credits, and cash equivalent incentives are applied. Incremental cost is the difference in cost between the purchase or lease price of the new vehicle and/or retrofit, and its new conventional vehicle counterpart that meets, but does not exceed, 2011 emissions standards.

Each vehicle funded must meet the cost-effectiveness requirement.

23. Alternative Fuel Medium Heavy-Duty and Heavy Heavy-Duty Service Vehicles (low-mileage utility trucks in idling service):

Eligibility: For TFCA purposes, medium and heavy-duty service vehicles are on-road motor vehicles with a Gross Vehicle Weight Rating (GVWR) of 14,001 lbs. or heavier. This category includes only vehicles in which engine idling is required to perform the primary function (for example, crane or aerial bucket trucks). In order to qualify for this incentive, each new vehicle must be placed into a service route that has a minimum idling time of 520 hours/year, and a minimum mileage of 500 miles/year.

TFCA funds awarded may not exceed the difference in the purchase or lease price of the new clean air vehicle that surpasses the applicable emissions standards and its new conventional vehicle counterpart that meets, but does not exceed, current emissions standards (incremental cost).

Each vehicle funded must meet the cost-effectiveness requirement.

Scrapping Requirements: Project sponsors of heavy-duty clean air vehicles purchased or leased with TFCA funds that have model year 1998 or older heavy-duty diesel vehicles in their fleet are required to scrap one model year 1998 or older heavy-duty diesel vehicle for each new clean air vehicle purchased or leased with TFCA funds. Costs related to the scrapping of heavy-duty vehicles are not eligible for reimbursement with TFCA funds.

24. Alternative Fuel Heavy-Duty Vehicles (high mileage):

Eligibility: For TFCA purposes, Alternative Fuel Heavy-Duty Vehicles are defined as follows: Light-heavy-duty vehicles (LHDV) are those with a GVWR between 8,501 lbs. and 14,000 lbs., medium-heavy-duty vehicles (MHDV) are those with a GVWR between 14,001 lbs. and 33,000 lbs., and heavy-heavy-duty vehicles (HHDV) are those with a GVWR equal to or greater than 33,001 lbs. LHDV, MHDV and HHDV types and equipment eligible for funding include the following:

- A. New hybrid-electric, electric, and CNG/LNG vehicles certified by the CARB or that are listed by the IRS as eligible for a federal tax credit pursuant to the Energy Policy Act of 2005.
- B. CARB emissions-compliant vehicle system retrofits that result in reduced petroleum use.

TFCA funding may not be used to pay for non-fuel system upgrades such as transmission and exhaust systems.

TFCA funds awarded may not exceed incremental cost after all other applicable manufacturer and local/state rebates, tax credits, and cash equivalent incentives are applied. Incremental cost is the difference in cost between the purchase or lease price of the vehicle and/or retrofit, and its new conventional vehicle counterpart that meets, but does not exceed, 2011 emissions standards.

Scrapping requirements are the same as those in Policy #23. Each vehicle funded must meet the cost-effectiveness requirement.

25. Alternative Fuel Buses:

Buses are subject to the same Eligibility and Scrapping requirements listed in Policy #24. Each vehicle funded must meet the cost-effectiveness requirement.

For purposes of transit and school bus replacement projects, a bus is any vehicle designed, used, or maintained for carrying more than fifteen (15) persons, including the driver. A vehicle designed, used, or maintained for carrying more than ten (10) persons, including the driver, which is used to transport persons for compensation or profit, or is used by any nonprofit organization or group, is also a bus. A vanpool vehicle is not considered a bus.

26. Alternative Fuel Infrastructure:

Eligible refueling infrastructure projects include new dispensing and charging facilities, or additional equipment or upgrades and improvements that expand access to existing alternative fuel fueling/charging sites (e.g., electric vehicles, CNG). This includes upgrading or modifying private fueling/charging sites or stations to allow public and/or shared fleet access. Funding may be used to cover the cost of equipment and installation.

TFCA-funded infrastructure projects must be available to and accessible by the public. Equipment and infrastructure must be designed, installed and maintained as required by the existing recognized codes and standards and approved by the local/state authority.

Project sponsors are required to maintain the equipment for at least five years after installation.

TFCA funding may not be used to pay for fuel, electricity, operation, and maintenance costs.

27. **Ridesharing Projects:** Projects that provide carpool, vanpool or other rideshare services are eligible for funding. Projects that provide a direct or indirect financial transit or rideshare subsidy are also eligible under this category.

28. **Shuttle/Feeder Bus Service:**

Projects that significantly lower single-occupancy vehicle trips while minimizing emissions created by the shuttle vehicle are eligible for funding. The project's route must operate to or from a rail station, airport, or ferry terminal and must coordinate with connecting rail or ferry schedules. Projects cannot replace a local bus service or serve the same route as a local bus service, but rather must connect transit facilities to local commercial, employment and residential areas.

Shuttle/feeder bus service applicants must be either:

- 1) a public transit agency or transit district that directly operates the shuttle/feeder bus service; or
- 2) a city, county, or any other public agency.

Unless the application is the transit agency or transit district that directly implements this project, the project applicant must submit documentation from the General Manager of the transit district or transit agency that provides service in the area of the proposed shuttle route, which demonstrates that the proposed shuttle service does not duplicate or conflict with existing transit agency service.

The following is a listing of eligible project vehicle types that may be used for service:

- A. a zero-emission vehicle (e.g., electric, hydrogen);
- B. an alternative fuel vehicle (CNG, liquefied natural gas, propane, electric);
- C. a hybrid-electric vehicle;
- D. a post-1998 diesel vehicle with a CARB Verified Diesel Emission Control Strategy (e.g., retrofit); or
- E. a post-1990 gasoline-fueled vehicle.

Pilot shuttle/feeder bus service projects are required to meet a cost-effectiveness of \$125,000/ton during the first two years of operation (see Policy #2). A pilot project is a defined route that is at least 70% unique and has not previously been funded through TFCA. Applicants must provide data supporting the demand for the service, letters of support from potential users and providers, and plans for financing the service in the future.

29. **Bicycle Projects:**

New bicycle facility projects that are included in an adopted countywide bicycle plan or Congestion Management Program (CMP) are eligible to receive TFCA funds. Eligible projects are limited to the following types of bicycle facilities for public use that result in motor vehicle emission reductions:

- A. New Class-1 bicycle paths;
- B. New Class-2 bicycle lanes;
- C. New Class-3 bicycle routes;

- D. New bicycle boulevards;
- E. Bicycle racks, including bicycle racks on transit buses, trains, shuttle vehicles, and ferry vessels;
- F. Bicycle lockers;
- G. Capital costs for attended bicycle storage facilities;
- H. Purchase of two-wheeled or three-wheeled vehicles (self-propelled or electric), plus mounted equipment required for the intended service and helmets; and
- I. Development of a region-wide web-based bicycle trip planning system.

All bicycle facility projects must, where applicable, be consistent with design standards published in the California Highway Design Manual.

30. Arterial Management:

Arterial management grant applications must identify a specific arterial segment and define what improvement(s) will be made to affect traffic flow on the identified arterial segment. Projects that provide routine maintenance (e.g., responding to citizen complaints about malfunctioning signal equipment) are not eligible to receive TFCA funding. Incident management projects on arterials are eligible to receive TFCA funding. Transit improvement projects include, but are not limited to, bus rapid transit and transit priority projects. For signal timing projects, TFCA funds may only be used for local arterial management projects where the affected arterial has an average daily traffic volume of 20,000 motor vehicles or more, or an average peak hour traffic volume of 2,000 motor vehicles or more (counting volume in both directions). Each arterial segment must meet the cost-effectiveness requirement in Policy #2.

31. Smart Growth/Traffic Calming:

Physical improvements that support development projects and/or calm traffic, resulting in motor vehicle emission reductions, are eligible for TFCA funds, subject to the following conditions:

- A. The development project and the physical improvements must be identified in an approved area-specific plan, redevelopment plan, general plan, bicycle plan, pedestrian plan, traffic-calming plan, or other similar plan; and
- B. The project must implement one or more transportation control measures (TCMs) in the most recently adopted Air District plan for State and national ambient air quality standards.
Pedestrian projects are eligible to receive TFCA funding.

Traffic calming projects are limited to physical improvements that reduce vehicular speed by design and improve safety conditions for pedestrians, bicyclists or transit riders in residential, retail, and employment areas. Only projects with a completed and approved environmental plan may be awarded TFCA funds.

APPENDIX E

INSURANCE GUIDELINES

This appendix provides guidance on the insurance coverage and documentation typically required for TFCA Program Manager Fund projects. Note that the Air District reserves the right to specify different types or levels of insurance in the funding agreement.

The typical funding agreement requires that each Project Sponsor provide documentation showing that the Project Sponsor meets the following requirements for each of its projects. The Program Manager is not required to meet these requirements itself, unless it is acting as a project sponsor.

1. **Liability Insurance:**

Corporations and Public Entities - a limit of not less than \$1,000,000 per occurrence. Such insurance shall be of the type usual and customary to the business of the Project Sponsor, and to the operation of the vehicles, engines or equipment operated by the Project Sponsor.

Single Vehicle Owners - a limit of not less than \$750,000 per occurrence. Such insurance shall be of the type usual and customary to the business of the Project Sponsor, and to the operation of the vehicles, engines or equipment operated by the Project Sponsor.

2. **Property Insurance:**

New Equipment Purchases - an amount of not less than the insurable value of Project Sponsor's vehicles, engines or equipment funded under this Agreement, and covering all risks of loss, damage or destruction of such vehicles, engines or equipment.

Retrofit Projects - 2003 model year vehicles or engines or newer in an amount of not less than the insurable value of Project Sponsor's vehicles, engines or equipment funded under this Agreement, and covering all risks of loss, damage or destruction of such vehicles, engines or equipment.

3. **Workers Compensation Insurance:**

Construction projects – including but not limited to bike/pedestrian paths, bike lanes, smart growth and vehicle infrastructure, as required by California law and employers insurance with a limit not less than \$1 million.

4. **Acceptability Of Insurers:**

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A: VII. The Air District may, at its sole discretion, waive or alter this requirement or accept self-insurance in lieu of any required policy of insurance.

The following table lists the type of insurance coverage generally required for each project type. The requirements may differ in specific cases. Program Managers should contact the Air District liaison with questions, especially about unusual projects.

County Program Manager Fund Contract Activity	Insurance Required
Vehicle Purchase	Automobile Liability and Automobile Physical Damage
Engine Repowers/Retrofits	Automobile Liability and Automobile Physical Damage
Operation of shuttle from transit hubs	Commercial General Liability, Automobile Liability and Automobile Physical Damage
Transit pass subsidy or commute incentives	None
Transit Marketing Program	Commercial General Liability
Guaranteed Ride Home Program	None
Bicycle lockers and racks.	Commercial General Liability
Constructing bike/pedestrian path or overpass, bike lane, or smart growth or vehicle infrastructure	Commercial General Liability, Automobile Liability and Workers Compensation
Signal timing	Commercial General Liability

APPENDIX F

PROJECT INFORMATION

A. Project Number: 13XX01

Use consecutive numbers for projects funded, with year, county code, and number, e.g., 13MAR01, 13MAR02 for Marin County. Zero (e.g., 13MAR00) is reserved for County Program Manager TFCA funds allocated for administration costs.

B. Project Title: _____

Provide a concise, descriptive title for the project (e.g., "Elm Ave. Signal Interconnect" or "Purchase Ten Gasoline-Electric Hybrid Light-Duty Vehicles").

C. TFCA Program Manager Funds Allocated: \$ _____

D. TFCA Regional Funds Awarded (if applicable):\$ _____

E. Total TFCA Funds Allocated (sum of C and D):\$ _____

F. Total Project Cost: \$ _____

Indicate the TFCA dollars allocated (C, D and E) and total project cost (D). Data from Line E (Total TFCA Funds) should be used to calculate C-E.

G. Project Description:

Project sponsor will use TFCA funds to _____. Include information sufficient to evaluate the eligibility and cost-effectiveness of the project. Ex. of the information needed include but are not limited to: what will be accomplished by whom, how many pieces of equipment are involved, how frequently it is used, the location, the length of roadway segments, the size of target population, etc. Background information should be brief. For shuttle/feeder bus projects, indicate the hours of operation, frequency of service, and rail station and employment areas served.

H. Final Report Content: Final Report form and final Cost Effectiveness Worksheet

Reference the appropriate Final Report form that will be completed and submitted after project completion. See <http://www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources/TFCA/County-Program-Manager-Fund.aspx> for a listing of the following forms:

- Form for Ridesharing, Shuttles, Transit Information, Rail/Bus Integration, Smart Growth, and Traffic Calming Projects. (Includes Transit Bus Signal Priority.)*
- Form for Clean Air Vehicle and Infrastructure Projects*
- Form for Bicycle Projects*
- Form for Arterial Management Projects*

I. Attach a completed Cost-effectiveness Worksheet and any other information used to evaluate the proposed project. *For example, for vehicle projects, include the California Air Resources Board Executive Orders for all engines and diesel emission control systems. Note, Cost-effectiveness Worksheets are not needed for TFCA County Program Managers' own administrative costs.*

J. Comments (if any):

Add any relevant clarifying information in this section.

APPENDIX G

Instructions for Cost-Effectiveness Worksheets

Cost-effectiveness worksheets are used to calculate project emission reductions and TFCA cost-effectiveness (TFCA \$ / ton of emission reductions). County Program Managers must submit Cost-effectiveness Worksheets for each new project and each project receiving additional TFCA funds, along with Project Information forms, no later than six months after Air District Board approval of the Program Manager's Expenditure Plan. Program Managers must also submit C-E Worksheets with Final Reports; generally the C-E Worksheet will be the same as that used before the project, but if a project is delayed or is of long duration, the most recent C-E Worksheet should be used at time of Final Report, to most accurately reflect the emissions reduced. Consult with the Air District for support.

The Air District provides Microsoft Excel worksheets by e-mail. Worksheets must be completed for all project types with the exception of TFCA Program Manager administrative costs.

<u>Project Type</u>	<u>Worksheet Name</u>
Ridesharing, Shuttles, Bicycle, Smart Growth, and Traffic Calming Projects	Trip Reduction FYE 13
Arterial Management: Signal Timing	Arterial Management FYE 13
Transit Bus Signal Priority (also for Transit Rail Vehicles)	Trip Reduction FYE 13
Alternative-Fuel Light-Duty and Light Heavy-Duty Vehicles or Infrastructure	LD & LHD Vehicle FYE 13
Alternative-Fuel Low-Mileage Utility Trucks – Idling Service	Heavy-Duty Vehicle FYE 13
Alternative-Fuel Heavy-Duty Vehicles, Buses, or Infrastructure	Heavy-Duty Vehicle FYE 13

In using the worksheets, **only make entries in the yellow-shaded areas**. Begin each new filename with the application number (e.g., 13MAR04) as described below. Each worksheet contains separate tabs for: Instructions (no user input), General Information, Calculations, Notes and Assumptions, and Emission Factors (no user input).

Program Managers must provide all relevant assumptions used to determine the project's cost-effectiveness in the Notes & Assumptions tab. If a Program Manager seeks to use different default values or methodologies, they must consult with the Air District and obtain written approval before project approval, in order to avoid the potential for inappropriately funded projects.

The Air District encourages Program Managers to assign the shortest duration possible for the # Years of Effectiveness value for a project to meet the cost-effectiveness requirement. This practice will help Program Managers to minimize their administrative burden.

Instructions Specific to Each Project Type

Ridesharing and Shuttle Projects

A key variable in calculating cost-effectiveness is the number of vehicle trips eliminated. This value is **not** the same as the number of riders or participants. Rather it must be

reduced to capture the number of trips made by participants that otherwise would have been made by personal vehicle. A frequently used proxy is the number of survey respondents who report that they would have driven alone if not for the service provided.

Transit Signal Priority

For the length of trip, a good survey practice is to determine the length of automobile trip avoided by just those riders that otherwise would have driven, rather than by all riders.

Arterial Management Projects

Please note that each segment must meet the cost-effectiveness requirement. One C-E Worksheet should be submitted with all segments listed; if there are multiple segments, additional worksheets should be submitted showing the cost-effectiveness for each segment. This can be easily done by taking the worksheet with all segments and deleting the data from other segments.

For a signal timing project to qualify for 4 Years Effectiveness, the signals must be retimed after 2 years.

Smart Growth, Traffic Calming

Projects should show an increase in pedestrian/bike travel and transit use. Projects that only involve slowing automobile traffic briefly (e.g., via speed bumps) tend to not be effective, as the acceleration following deceleration increases emissions.

Vehicle and Fueling Infrastructure Projects

Calculating cost-effectiveness for vehicle grant projects can be complex, and it is recommended that it be done only by someone familiar with all applicable regulations and certifications. Also, any questions should be raised to Air District staff well before project approval deadlines in order to assure project success.

Please note that electric vehicle infrastructure generally does not qualify for more than \$2000 per charging spot, and Program Managers should consult with the Air District on such projects, as the evaluation methodologies are evolving. TFCA Policies require that projects subject to emission reduction regulations, contracts, or other legally binding obligations must achieve *surplus* emission reductions—that is, reductions that go beyond what is required. For example, vehicles with engines certified as Family Emission Limit (FEL) engines are not eligible for funding because the engine is certified for participation in an averaging, banking, and trading program in which emission benefits are already claimed by the manufacturer.

The cost-effectiveness of fueling infrastructure is based on the vehicles that will use the funded facility. Program Managers must exercise care that emission reductions from the associated vehicles are only credited towards a TFCA infrastructure project, and are not double counted in any other Air District grant program, either at the present time or for future vehicles that use the facility during its effective life.

The investment in each individual vehicle must be shown to be cost-effective. The Worksheet has been changed to list each vehicle separately and to make an individual cost-effectiveness calculation to assist you in meeting this requirement.

The total mileage a vehicle can travel may be limited by regulation, and the product of Years of Effectiveness and Average Annual Miles cannot exceed that mileage. E.g., some cities limit the lifetime miles a taxicab can travel.

Heavy-duty vehicle and infrastructure projects: The California Air Resources Board (CARB) Carl Moyer Program Guidelines document is the source for the formulas and factors used in the Heavy-Duty Vehicle worksheet. The full documentation is available at <http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>. Note that there are some differences between the TFCA and Moyer programs; consult with Air District staff with any questions. At a minimum, a funded vehicle must have an engine complying with the model year 2010 and later emission standards.

Documentation and Recordkeeping: Beginning in FY11/12, Project files must be maintained by Program Managers and Project Sponsors for a minimum of *five years* following completion of the Final Report, versus three years as before. Project files must contain all related documentation including copies of CARB executive orders, quotes, mileage logs, fuel usage (if cost-effectiveness is based on fuel use), photographs of engines and frames that were required to be scrapped, and financial records, in order to document the funding of eligible and cost-effective projects.

Guidance on inputs for the worksheets follows.

Instructions Tab

Provides instructions applicable to the relevant project type(s).

General Information Tab

Project Number, which has three parts:

1st – fiscal year in which project will be funded (e.g., 13 for FYE 2013).

2nd – County Program Manager; use the following abbreviations:

ALA – Alameda	CC - Contra Costa	MAR – Marin
NAP – Napa	SF - San Francisco	SM - San Mateo
SC - Santa Clara	SOL – Solano	SON – Sonoma

3rd – two-digit number identifying project; 00 is reserved for Program Manager admin costs.

Example: 13MAR04 = fiscal year ending **2013**, **Marin**, Project **#04**.

Project Title: *Short and descriptive* title of project, matching that on the Project Information form.

Project Type Code: Insert one and only one of the following codes for the corresponding project type. If a project has multiple parts, use the code for the main component. Note that not all listed project types may be allowed in the current funding cycle.

Code	Project Type	Code	Project Type
0	Administrative costs	6b	Shuttle services – gasoline powered
1a	NG buses (transit or shuttle buses)	6c	Shuttle services – NG powered
1b	EV buses	6d	Shuttle services – EV powered
1c	Hybrid buses	6e	Shuttle services – Fuel cell powered
1d	Fuel cell buses	6f	Shuttle services – Hybrid vehicle
1e	Buses – Alternative fuel	6g	Shuttle services – Other fuel type
2a	NG school buses	6h	Shuttle services w/TFCA purchased retrofit
2b	EV school buses	6i	Shuttle services – fleet uses various fuel types
2c	Hybrid school buses	7a	Class 1 bicycle paths
2d	Fuel cell school buses	7b	Class 2 bicycle lanes

Code	Project Type	Code	Project Type
2e	School buses – Alternative fuel	7c	Class 3 bicycle routes, bicycle boulevards
3a	Other heavy-duty – NG (street sweepers, garbage trucks)	7d	Bicycle lockers and cages
3b	Other heavy-duty – EV	7e	Bicycle racks
3c	Other heavy-duty – Hybrid	7f	Bicycle racks on buses
3d	Other heavy-duty – Fuel cell	7g	Attended bicycle parking (“bike station”)
3e	Other heavy-duty - Alternative fuel (High Mileage)	7h	Other type of bicycle project (e.g., bicycle loop detectors)
3f	Other heavy-duty - Alternative fuel (Low Mileage)	8a	Signal timing (Regular projects to speed traffic)
4a	Light-duty vehicles – NG	8b	Arterial Management – transit vehicle priority
4b	Light-duty vehicles – EV	8c	Bus Stop Relocation
4c	Light-duty vehicles – Hybrid	8d	Traffic roundabout
4d	Light-duty vehicles – Fuel cell	9a	Smart growth – traffic calming
4e	Light-duty vehicles – Other clean fuel	9b	Smart growth – pedestrian improvements
5a	Implement TROs (pre-1996 projects only)	9c	Smart growth – other types
5b	Regional Rideshare Program	10a	Rail-bus integration
5c	Incentive programs (for any alternative mode)	10b	Transit information / marketing
5d	Guaranteed Ride Home programs	11a	Telecommuting demonstration
5e	Ridesharing – Vanpools (if cash incentive only, use 5c)	11b	Congestion pricing demonstration
5f	Ridesharing – School carpool match	11c	Other demonstration project
5g	Other ridesharing / trip reduction projects	12a	Natural gas infrastructure
5h	Trip reduction bicycle projects (e.g., police on bikes)	12b	Electric vehicle infrastructure
6a	Shuttle services – diesel powered	12c	Alternative fuel infrastructure

County: Use the same abbreviations as used in Project Number.

Worksheet Calculated by: Name of person completing the worksheet.

Date of Submission: Date submitted to the Program Manager.

Project Sponsor Org.: Organization responsible for the project.

Contact Name: Name of individual responsible for implementing the project.
Include all contact information requested (email, phone, address).

Project Start Date Project must meet Readiness Policy (Policy #6).

Completion Date & Final Report to CMA: Program Managers must expend funds within two years of receipt, unless an application states that the project will take a longer period of time and is approved by the Program Manager or the Air District.

Calculations Tab

Because the worksheets have many interrelated formulas and references, users must not add or delete rows or columns, or change any formulas, without consulting with the Air District. Several cells have input choices or information built in, as pull-down menus or comments in Excel. Pull-down menus are accessed by clicking on the cell. Comments are indicated by a small triangle in the upper right corner of a cell, and are made visible by resting the cursor over the cell.

Cost Effectiveness Inputs

Years Effectiveness: See inputs table below. Note, best practice is to use shortest value possible.

Total Project Cost:	Total cost of project including TFCA funding, sponsor funding, and funds contributed by other entities. Only include goods and services of which TFCA funding is an integral part.
TFCA Cost:	TFCA 40% County Program Manager Funds and the 60% Regional Funds (if any), listed separately.

Emission Reduction Calculations

Instructions and default values for each project type are provided in the table below. Default values for years of effectiveness are provided for the various project types. There are no defaults for Smart Growth projects, due to the wide variability in these projects.

Notes & Assumptions Tab

Provide an explanation of all assumptions used. If you do not use the Air District's guidelines and default values to determine cost-effectiveness, you must document and explain your inputs and assumptions after receiving written approval from the Air District.

Emission Factors Tab

This tab contains references for the Calculations tab. **No changes shall be made to this tab.**

Additional Information for Heavy-duty Vehicle Projects

CARB has adopted a number of standards and fleet rules limit funding opportunities for on-road heavy-duty vehicles. See the below list of CARB rules that affect on-road heavy-duty fleets, followed by a reference sample CARB Executive Order.

Summary of On-Road Heavy-Duty Fleet Rules

Vehicle Type	Subject to CARB Fleet Rule?
Urban buses	Fleet Rule for Transit Agencies
Transit Fleet Vehicles	Fleet Rule for Transit Agencies
Solid Waste Collection Vehicles, excluding transfer trucks	Solid Waste Collection Vehicle Regulation
Municipal Vehicles and Utility Vehicles	Fleet Rule for Public Agencies and Utilities
Port and Drayage Trucks	Port Truck Regulation
All other On-road heavy-duty vehicles	On-road Rule

A fleet's compliance status with the CARB regulation must be determined. Contact Air District staff or consult fleet rule Carl Moyer Implementation Charts at:

<http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm> for assistance.

Emission Reduction Inputs

Project Type/Worksheet Name	Input Data Needed	Default Assumptions
Ridesharing / Trip Reduction Project Type = 5a-h, 8b, 9a-c, 11a, or 11b Worksheet = Trip Reduction FYE 13 Note: For ridesharing, the Air District generally assumes that the maximum number of vehicle trips reduced per day is 1% of target population.	<u>Ridesharing</u> <ul style="list-style-type: none"> # Years Effectiveness # Trips/Day (1-way) eliminated [% of target population (# employees)] Days/Yr Trip Length (1-way) # New Trips/Day (1-way) to access transit Days/Yr Trip Length (1-way) 	<ul style="list-style-type: none"> Enter in Cost Effectiveness Inputs, up to 2 years Enter in Step 1-Column A, 1% of target population Enter in Step 1-Column B, 240 days (max.) Step 1-Column C, Default = 16 miles (1-way commute distance from MTC's Commute Profile) Step 2-Column A, Default = 50% of # Trips/Day Eliminated (Step 1-Column A) Enter in Step 2-Column B, same # as Step 1-Column B Enter in Step 2-Column C, Default = 3 miles
	<u>School-Based Ridesharing</u> <ul style="list-style-type: none"> # Years Effectiveness # Trips/Day (1-way) eliminated [% of target population (total # students)] Days/Yr Trip Length (1-way) 	<ul style="list-style-type: none"> Enter in Cost Effectiveness Inputs, up to 2 yrs Step 1-Column A, No Default Enter in Step 1-Column B, 180 days (max.) Step 1-Column C, 1-3 miles
	<u>Transit Incentive Campaigns</u> <ul style="list-style-type: none"> # Years Effectiveness # Trips/Day (1-way) eliminated [% of target population]. Use survey data if available. Days/Yr Trip Length (1-way), based on routes accessed # New Trips/Day (1-way) to access transit Days/Yr (new trips) Trip Length (1-way) for new trips 	<ul style="list-style-type: none"> Enter in Cost Effectiveness Inputs, up to 2 yrs Step 1-Column A, No default Enter in Step 1-Column B, 90 days (max.) if # Trips/Day based on % of target population. If # Trips/Day based on participants, 240 days (max.) Step 1-Column C, No Default Step 2-Column A, No Default Enter in Step 2 - same as # days used in Step 1 Step 2-Column C, Default = 3 miles
	<u>Guaranteed Ride Home Programs</u> <ul style="list-style-type: none"> # Years Effectiveness # Trips/Day (1-way) eliminated Days/Yr Trip Length (1-way) 	<ul style="list-style-type: none"> Enter in Cost Effectiveness Inputs, up to 2 years Enter in Step 1-Column A, 0.2% of target population. Enter in Step 1-Column B, 240 days (Max.) Step 1-Column C, Default = 16 miles

County Program Manager Fund Expenditure Plan Guidance FYE 2013

	<p><u>Transit Vehicle Signal Prioritization</u></p> <ul style="list-style-type: none"> • # Years Effectiveness • # Trips/Day (1-way) eliminated • Days/Yr • Trip Length (1-way) 	<ul style="list-style-type: none"> • Enter in Cost Effectiveness Inputs, 2 yrs • Step 1-Column A, No Default • Enter in Step 1-Column B, 250 days (max) • Step 1-Column C, No Default
--	--	---

Emission Reduction Inputs

Project Type/Worksheet Name	Input Data Needed	Default Assumptions
<p>Bicycle Projects Project Type = 7a-h Worksheet = Trip Reduction FYE 13 Methodology to estimate number of trips reduced for bike paths, lanes, & routes based on: - the type of facility (Class 1, 2, or 3) - the length of the project segment - the traffic volume (ADT) on the facility. For Class 1 projects, use the ADT on the most appropriate parallel road.</p> <p>For gap closure projects (where project will close a gap between two existing segments of bikeway), use the length for the total facility.</p> <p>Note: the maximum number of vehicle trips reduced per day is 240. The Air District generally assumes that no bike project will reduce more than 240 vehicle trips per day.</p> <p>The Air District normally uses an average trip length of 3 miles (one-way) for bicycle projects.</p>	<p><u>Bicycle Projects (Paths, Lanes, Routes)</u></p> <ul style="list-style-type: none"> • # Years Effectiveness Class 1 bike path (or bike bridge) Class 2 bike lane Class 3 bike route • # Trips/Day (1-way) eliminated (depends on length of project segment and ADT on project segment) Class 1 bike path & Class 2 bike lane ADT ≤ 12,000 vehicles per day Class 1 bike path & Class 2 bike lane ADT > 12,000 and ≤ 24,000 Class 1 bike path and Class 2 bike lane ADT > 24,000 and ≤ 30,000 Maximum is 30,000. Class 3 bike route or bicycle boulevard • Days/Yr • Trip Length (1-way) 	<ul style="list-style-type: none"> • Enter in Cost Effectiveness Inputs: Not to exceed 20 years for Class 1 projects (trails/paths) Not to exceed 15 years for Class 2 & Class 3 projects • Enter in Step 1-Column A: Length ≤ 1 mile = 0.4% ADT Length >1 and ≤ 2 miles = 0.6% ADT Length >2 miles = 0.8% ADT Length ≤ 1 mile = 0.3% ADT Length > 1 and ≤ 2 miles = 0.45% ADT Length > 2 miles = 0.6% ADT Length ≤ 1 mile = 0.25% ADT Length > 1 and ≤ 2 miles = 0.35% ADT Length > 2 miles = 0.45% ADT Route ≤ 1 mile = 0.1% ADT Route > 1 and ≤ 2 miles = 0.15% ADT Route > 2 miles = 0.25% ADT • Enter in Step 1-Column B, 240 days • Enter in Step 1-Column C, 3 miles. (Not same as segment length.)

	<p align="center"><u>Bicycle Lockers & Racks</u></p> <ul style="list-style-type: none"> • # Years Effectiveness • # Trips/Day (1-way) eliminated • Days/Yr • Trip Length (1-way) 	<ul style="list-style-type: none"> • Enter in Cost Effectiveness Inputs, 10 yrs • Enter in Step 1-Column A: Capacity of lockers x 1 trip/day Capacity of cages x 0.75 trips per day Capacity of racks x 0.5 trips per day • Enter in Step 1-Column B, 240 days • Enter in Step 1-Column C, 3 miles
--	---	--

Emission Reduction Inputs

Project Type/Worksheet Name	Input Data Needed	Default Assumptions
<p>Shuttles / Rail-Bus Integration / Transit Info Project Type =6a-i, 10a, or 10b Worksheet = Trip Reduction FYE 13</p> <p><i>Step 2 calculates emissions from new trips generated.</i></p> <p><i>When possible, emissions from shuttle vehicles should be based on the vehicle engine Executive Order. Program Manager should</i></p>	<p><u>Shuttle/Feeder Bus, Rail-Bus Integration, and Transit Information Systems</u></p> <ul style="list-style-type: none"> • # Years Effectiveness • # Trips/Day (1-way) eliminated trips. Trips only from riders who previously would have driven. • Days/Yr eliminated trips • Trip Length (1-way) eliminated trips. Average trip length that will be eliminated due to shuttle passengers taking train/ferry in conjunction with the shuttle. • # Trips/Day (1-way) new trips to access transit • Days/Yr new trips • Trip Length (1-way) new trips. Average trip length of shuttle passengers that drive from home to the BART/Caltrain station. 	<ul style="list-style-type: none"> • Cost Effectiveness Inputs, up to 2 years • Step 1-Column A, For on-going service, use survey results For new service, use 50% of daily seating capacity of vehicle * 67% (% single-occupancy vehicles (SOV) from MTC Commuter Profile) • 1-Column B, Enter number of operating days. Default =254 days/yr. • Enter in Step 1-Column C, a survey-based distance, or, if no survey, 16 miles for shuttles and 35 miles for vanpools • Step 2-Column A, Use survey data or, if none, a default is 50% of # Trips/Day Eliminated (Step 1-Column A) • Enter in Step 2-Column B, same # as in Step 1-Column B. • Enter in Step 2-Column C, a survey-based distance, or, if no survey, default is 3 miles for home-to-rail trips.

County Program Manager Fund Expenditure Plan Guidance FYE 2013

<p><i>consult with Air District staff for guidance.</i></p> <p><i>For vans and shuttle vehicles 14,000 lbs. and lighter, use Step 3A.</i></p>	<ul style="list-style-type: none"> • # Vehicles, Model Year: Number of vehicles with same model year • Emission Std.: Emission Standard from list provided. • Vehicle GVW: Weight Class from list provided. • ROG, NO_x, Exhaust PM₁₀, and Total PM₁₀ Factors: enter factor from appropriate table provided on Emission Factors tab—ARB Table 2 for vehicles model year 2004 and after, or ARB Table 7 for model years 1995-2003. • CO₂ Factor: enter factor from CO₂ Table for Light- and Light Heavy-Duty Shuttles, on Emission Factors tab. • Total annual VMT = [length of shuttle/van trip (one-way)] X [# one-way trips per day] X [# days of service per year]. For all vehicles listed in Step 3A. • ROG, NO_x, Exhaust PM₁₀, Other PM₁₀ and CO₂ Factors: enter factor from Emissions for Buses Table provided on Emission Factors tab. • Total annual VMT = [length of shuttle/van trip (one-way)] X [# one-way trips per day] X [# days of service per year]. For all vehicles listed in Step 3B. 	<ul style="list-style-type: none"> • Step 3A - Column A, no default. • 3A - Column B, no default. • 3A Column C, no default. • 3A Column D through G, no default • 3A Column H, no default. • 3A Column I, no default. • Step 3B: Columns D through H, no default. Note that Step 3B uses Other PM₁₀, not Total PM₁₀. • 3B Column I, no default.
<p><i>For buses, use Step 3B. If a vehicle does not match the factors provided, Program Manager should consult with Air District staff.</i></p>		

Emission Reduction Inputs

Project Type/Worksheet Name	Input Data Needed	Default Assumptions
Arterial Management Project Type = 8a Worksheet = Arterial Management FYE 13	<u>Arterial Management</u> <ul style="list-style-type: none"> • # Years Effectiveness • Name of Arterial • Segment Length (miles) • Days/Yr. • Time Period • Traffic Volume • Traffic Speed without the Project • Travel Speed with Project 	<ul style="list-style-type: none"> • Enter in Cost Effectiveness Inputs: For signal timing/synchronization, 2 yrs or, with retiming required at 2 yrs, 4 yrs. Each project should include either 2- or 4-year segments, not both. • Column A: Name of the arterial and the direction of travel. • Enter under Column B the length of arterial over which speeds will be increased. • Enter under Column C the number of days per year over which the project would affect traffic. Default is 250 days. • Enter under Column D the time period over which the traffic volumes and speed will change (e.g., 4-7 PM). Include all the hours in a period that will benefit, not just the peak hour. • Enter under Column E the traffic volume before the project for the corresponding Time Period and direction of travel that will make the stated speed change. • Enter under Column F the average traffic speed along the length of the arterial before implementation of the project. • Enter under Column G the average estimated traffic speed along the length of the arterial after implementation of the project. <i>Note: Maximum increase in speed is 25%.</i>
[Smart Growth]	<u>Smart Growth / Traffic Calming</u>	No default assumptions for “smart growth” or traffic calming projects are available. Provide detailed explanations of any assumptions and calculations in the Notes and Assumptions tab.

Emission Reduction Inputs

Alt-fuel Heavy-Duty Vehicles and Infrastructure

Project Types = 1a, 1b, 1c, 1d, 1e, 2a, 2b, 2c, 2d, 2e, 3a, 3b, 3c, 3d, 3e, 3f, 12a, 12b, 12c

Worksheet = Heavy Duty Vehicle FYE 13

Input Data Needed	Default Assumptions
<ul style="list-style-type: none"> Cost Effectiveness Inputs, # Years Effectiveness. Use separate workbook and Project # for each set of vehicles with different # Years Effectiveness or with different fuel types. 	<ul style="list-style-type: none"> Not to exceed 7 years.
<ul style="list-style-type: none"> Column B, Unit #: A unique identifier. List each vehicle on a separate row. 	<ul style="list-style-type: none"> Column B: No default
<ul style="list-style-type: none"> Columns C through E, Baseline Emission Rate: NO_x, ROG, PM factors: See Moyer Table D-1a/b or D-6, based on your vehicle type, weight, and engine model year. 	<ul style="list-style-type: none"> Columns C through E: For FYE 2013 alt-fuel heavy-duty vehicle projects, including urban buses, the baseline default is the Model Year 2010 emission standards.
<ul style="list-style-type: none"> Column F, Annual Fuel Use: Base on average fuel use over 2 years, and document with 2 years of records. 	<ul style="list-style-type: none"> Column F: No default.
<ul style="list-style-type: none"> Column G, Fuel Consumption Factor: Moyer Table D-24 	<ul style="list-style-type: none"> Column G: Most on-road engines are below 750 horsepower, thus the default value is 18.5.
<ul style="list-style-type: none"> Column H, Conversion Factor (g/mi to g/bhp-hr): Input a value only if Baseline Emission Rates (Columns C – E) are in g/mi and Fuel Basis is being used. Notice: enter data in this column or Column J, not both. Use Moyer Table D-28. 	<ul style="list-style-type: none"> Column H: No default.
<ul style="list-style-type: none"> Column I, Annual VMT: Base on average VMT over 2 years, and document with 2 years of mileage records. 	<ul style="list-style-type: none"> Column I: No default.
<ul style="list-style-type: none"> Column J, Conversion Factor (g/bhp-hr to g/mi): Input a value only if Baseline Emission Rates (Columns C – E) are in g/bhp-hr. Notice: enter data in this column or Column H, not both. Use Moyer Table D-28. 	<ul style="list-style-type: none"> Column J: No default.
<ul style="list-style-type: none"> Column K, Percent operation in Air District: Only the operation within the Bay Area Air Quality Management District can be counted. Boundaries available from the Air District. 	<ul style="list-style-type: none"> Column K: No default.
<ul style="list-style-type: none"> Columns L through N, New Emission Rate: NO_x, ROG, and PM: Use Executive Order values. Note: FEL engines are not eligible for TFCA funding. CARB certifies engines and provides the engine manufacturers with an Executive Order (EO) for each certified engine family. An example of an EO is shown at the end of this attachment. The EO includes general information about the certified engine such as engine family, displacement, horsepower rating(s), intended service class, and emission control systems. It also shows the applicable certification emission standards as well as the average emission levels measured during the actual certification test procedure. For the purpose of the TFCA Program, the certification emission standards are used to calculate emission reductions. The certification emission standards are shown in the row titled “(DIRECT) STD” under the respective “FTP” column headings for each pollutant. For instance, the Cummins 8.3 liter natural gas engine 	<ul style="list-style-type: none"> Columns L through N: For FYE 2013 heavy-duty vehicle projects, including urban buses, the new vehicle must be certified to <i>exceed</i> the Model Year 2010 standard of 0.2 g/bhp-hr of NO_x and 0.01 g/bhp-hr of PM, which are the default values. Some exceptions apply.

County Program Manager Fund Expenditure Plan Guidance FYE 2013


Input Data Needed	Default Assumptions
<p>illustrated in the sample was certified to a combined oxides of nitrogen plus non-methane hydrocarbon (NO_x+NMHC) emission standard of 1.8 g/bhp-hr, a carbon monoxide (CO) emission standard of 15.5 g/bhp-hr, and a particulate matter (PM) emission standard of 0.03 g/bhp-hr.</p> <p>In the case where an EO shows emission values in the rows labeled “AVERAGE STD” and/or “FEL”, the engine is certified for participation in an averaging, banking, and trading (AB&T) program. AB&T engines (i.e., all FEL-certified engines) are not eligible to participate in the TFCA Program for new vehicle purchase projects since emission benefits from an engine certified to an FEL level are not surplus emissions.</p>	
<ul style="list-style-type: none"> Column O, Replacement Vehicle Cost: Must be supported by a quote for the new alt-fuel vehicle that exceeds standards. 	<ul style="list-style-type: none"> Column O: No Default.
<ul style="list-style-type: none"> Column P, Must be supported by a quote for a new vehicle that meets but does not exceed standards (for FYE 2013, the Model Year 2010 Standards). 	<ul style="list-style-type: none"> Column P: No Default.
<ul style="list-style-type: none"> Column Q, Fuel Savings. 	<ul style="list-style-type: none"> Column Q: Default value is 0%. For new hybrid vehicles, on a case-by-case basis, the Air District may approve another value, based on documented fuel savings relative to a non-hybrid vehicle.
<ul style="list-style-type: none"> Column R, Fuel Consumption Factor: Use Moyer Table D-24. 	<ul style="list-style-type: none"> Column R: Most on-road engines are below 750 horsepower.
<ul style="list-style-type: none"> Column S, Conversion Factor (g/mi to g/bhp-hr): Enter a value only if New Emission Rates (Columns L – N) are in g/mi and Fuel Basis is being used. Notice: enter data in this column or Column T, not both. Use Moyer Table D-28. 	<ul style="list-style-type: none"> Column S: No default.
<ul style="list-style-type: none"> Column T, Conversion Factor (g/bhp-hr to g/mi): Enter a value only if New Baseline Emission Rates (Columns L – N) are in g/bhp-hr. Notice: enter data in this column or Column S, not both. Use Moyer Table D-28. 	<ul style="list-style-type: none"> Column T: No default.
<ul style="list-style-type: none"> Column Y, # Years Effectiveness: Same as in Cost Effectiveness Inputs. 	<ul style="list-style-type: none"> Column Y: 7 yrs max.
<ul style="list-style-type: none"> Column Z, Incremental Cost: The cost of the proposed vehicle minus the baseline vehicle. 	<ul style="list-style-type: none"> Column Z: Automatically calculated.
<ul style="list-style-type: none"> Columns AB – AG, Emission Reductions. All reductions must be surplus to any regulatory, contractual, or other legally binding requirement. Note that if ROG values are not available for both the baseline and the proposed engine, ensure value is zero (0) for ROG, as no ROG emission reductions can be claimed. 	<ul style="list-style-type: none"> Columns AB – AG. Calculated automatically. Enter zero (0) if a reduction cannot be claimed.
<ul style="list-style-type: none"> Column AM, TFCA Funding Amount: Amount of total TFCA funding. The column total must equal Total TFCA Cost from Cost-Effectiveness Inputs at top of worksheet. 	<ul style="list-style-type: none"> Column AM: Cannot exceed Incremental Cost.

County Program Manager Fund Expenditure Plan Guidance FYE 2013

Input Data Needed	Default Assumptions
<ul style="list-style-type: none"> Column AP, Actual Weighted CE w/o CRF--Miles Basis (\$/ton). Cost-effectiveness based on emissions including weighted PM. Must meet Policy Requirements. 	<ul style="list-style-type: none"> Column AP: Calculated automatically.
<ul style="list-style-type: none"> Column AQ, Actual Weighted Contract CE w/o CRF--Fuel Basis (\$/ton). Cost-effectiveness based on emissions including weighted PM. Must meet Policy Requirements. <p>Emissions and cost-effectiveness calculations can only be based on fuel usage for the following vehicles:</p> <ul style="list-style-type: none"> Utility vehicles in idling service Street sweepers Solid waste collection vehicles. <p>All other vehicles must use mileage basis. If using fuel-based calculations, usage must be based on two years of historical fuel usage documentation (e.g., fuel logs or purchase receipts).</p>	<ul style="list-style-type: none"> Column AQ: Calculated automatically.
<ul style="list-style-type: none"> Column AS, Baseline CO₂ Factor Based on Mileage: Enter value from CO₂ Emission Factors Table for your fuel and vehicle type (e.g., Medium Heavy Duty Diesel is 1527 g/mi). 	<ul style="list-style-type: none"> Column AS: No default.
<ul style="list-style-type: none"> Column AT, Proposed Engine CO₂ Factor Based on Mileage: Enter value from CO₂ Emission Factors Table for your fuel and vehicle type (e.g., Medium Heavy Duty CNG 1098 g/mi). 	<ul style="list-style-type: none"> Column AT: No default.
<ul style="list-style-type: none"> Column AV, Baseline CO₂ Factor Based on Fuel Use: Enter value from CO₂ Emission Factors Table for your fuel type (e.g., Diesel is 10079 g/mi). 	<ul style="list-style-type: none"> Column AV: 10079 g/mi.
<ul style="list-style-type: none"> Column AW, Proposed Engine CO₂ Factor Based on Fuel Use: Enter value from CO₂ Emission Factors Table for your fuel type (e.g., CNG is 7244 g/mi). 	<ul style="list-style-type: none"> Column AW: No default.

Project Type/Worksheet Name	Input Data Needed	Default Assumptions
Alt-fuel Vehicles and Infrastructure: Light-Duty and Light Heavy-Duty Project Types = 4a, 4b, 4c, 4d, 4e, 12a, 12b, 12c Worksheet = LD & LHD Vehicle FYE 13	<ul style="list-style-type: none"> # Years Effectiveness 	<ul style="list-style-type: none"> Not to exceed 5 years.
	<ul style="list-style-type: none"> Unit # / ID 	<ul style="list-style-type: none"> List each vehicle separately.
	<ul style="list-style-type: none"> Incremental Cost 	<ul style="list-style-type: none"> For new vehicles, must be based on two quotes—one for the new alt-fuel vehicle, and one for a new conventionally-fueled counterpart that meets but does not exceed current emission standards.
	<ul style="list-style-type: none"> Current Standard and New Vehicle Standard Cost-Effectiveness 	<ul style="list-style-type: none"> Enter in Columns E and F the standard that a vehicle is certified to, as shown on the CARB Executive Order. Column U, automatically calculated. Each vehicle must meet the Policy requirements for cost-effectiveness.

Sample CARB Executive Order for Heavy-Duty On-Road Engines

 AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER A-021-0340 New On-Road Heavy-Duty Engines
--	---------------------	---

Pursuant to the authority vested in the Air Resources Board (ARB) by Health and Safety Code (HSC) Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order (EO) G-02-003; and

Pursuant to the December 15, 1998 Settlement Agreement (SA) between ARB and the manufacturer, and any modifications thereof to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZE (liter)	FUEL TYPE (CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas)	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS (L/M/H HDD=light/medium/heavy heavy-duty [HD] diesel; UB=urban bus; HDO=HD Otto)
2003	3CEXH0505CBK	8.3	CNG / LNG	Diesel	UB
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		ENGINE MODELS / CODES (rated power in horsepower, hp)			
TBI, OC, HO2S, TC, CAC, PCM		CG-280 / 8012 (280 hp), CG-275 / 8009 (275 hp), CG-250 / 8006 (250 hp), CG-250 / 8003 (250 hp)			
GVWR=gross vehicle weight rating TW/OC=three-way/oxidizing catalyst WU (prefix)=warm-up cat. O2S=oxygen sensor HO2S=heated O2S TBI=throttle body fuel injection MFI=multi port fuel injection SFI=sequential MFI DDID=direct/indirect diesel injection TC/SC=turbo/super charger CAC=charge air cooler EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR SPL=smoke puff limiter ECM/PCM=engine /powertrain control module EM=engine modification 2 (prefix)=parallel (2) (suffix)=in series HC=hydrocarbon NMHC=non-methane HC NOx=oxides of nitrogen CO=carbon monoxide PM=particulate matter HCHO=formaldehyde g/bhp-hr=grams per brake horsepower-hour					

The following are the exhaust emission standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for this engine family under the "Federal Test Procedure" (FTP) (Title 13, California Code of Regulations, (13 CCR) Section 1956.1 (urban bus) or 1956.8 (other than urban bus)), and under the "Euro III Test Procedure" (EURO) in the Settlement Agreement, including EURO's "Not-to-Exceed" standard(s): "Diesel" CO certification compliance may have been demonstrated pursuant to Code of Federal Regulations, Title 40, Part 86, Subpart A, Section 86.091-23(c)(2)(i) in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR Section 1956.1 or 1956.8 are in parentheses.)

* = not applicable	HC		NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
(DIRECT) STD	*	*	*	*	*	*	1.8	1.8	15.5	15.5	0.03	0.03	*	*
AVERAGE STD	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CERT	*	*	*	*	*	*	1.7	1.4	2.0	1.3	0.01	0.005	*	*

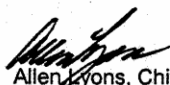
BE IT FURTHER RESOLVED: That certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

BE IT FURTHER RESOLVED: That the listed engine models have been certified to the FTP optional NOx, or NMHC+NOx as applicable, and PM emission standard(s) listed above pursuant to 13 CCR Section 1956.1 or 1956.8.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR Sections 1965 (emission control labels), and 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: That the listed engine models are conditionally certified subject to the following conditions: (1) The SA is in effect; (2) The manufacturer is in compliance with all applicable California emission regulations, and all SA's applicable requirements and any modifications thereof; (3) This EO is void with respect to any engine within this family determined to have a defeat device as that term is defined in the test procedures and SA. Any engine produced under the voided EO remains subject to stipulated penalties under the SA. Such penalties would begin to accrue upon manufacture of the first engine under this EO; (4) This EO expires at midnight on December 31, 2002; (5) Production of any engine within this family under this EO is acceptance of all conditions in this EO; and (6) ARB reserves the right to disapprove certification of this family, or any families using the same or similar auxiliary emission control device (AECD) strategies as this family is employing, based on all available information.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.
Executed at El Monte, California on this 20th day of October 2002.



Allen Lyons, Chief
Mobile Source Operations Division